

# MICHIGAN

## Science and Engineering Profile

	Michigan	U.S.	Rank		Michigan	U.S.	Rank
Doctoral scientists, 1993	11,796	430,332	14	Total R&D performance, 1993 (millions)	\$10,778	\$161,427	3
Doctoral engineers, 1993	2,684	81,293	10	Industry R&D, 1993 (millions)	\$9,924	\$117,622	2
S&E doctorates awarded, 1995	998	26,482	8	Academic R&D, 1994 (millions)	\$730	\$20,573	8
of which, in engineering	27%	23%		of which, in life sciences	54%	55%	
in life sciences	22%	24%		in engineering	18%	16%	
in social sciences	15%	15%		in social sciences	9%	4%	
S&E postdoctorates, 1994				Higher education current-fund			
in doctorate-granting institutions	1,148	36,143	9	expenditures, 1993 (millions)	\$5,715	\$163,994	8
S&E graduate students, 1994				Number of SBIR awards, 1990-94	302	18,023	15
in doctorate-granting institutions	17,350	438,694	9	Patents issued to state residents, 1995	2,779	55,717	5
Population, 1995 (000s)	9,549	262,755	8	Gross state product, 1992 (billions)	\$204.4	\$5,994.1	9
Civilian labor force, 1995 (000s)	4,745	132,281	8	of which, agriculture	1%	2%	
Personal income per capita, 1995	\$23,551	\$22,788	16	manufacturing, mining, construction	31%	23%	
Federal spending				transportation, communication, utilities	7%	9%	
Total expenditures, 1995 (millions)	\$39,372	\$1,326,294	9	wholesale and retail trade	16%	16%	
R&D obligations, 1994 (millions)	\$770	\$65,654	20	finance, insurance, real estate	16%	18%	
				services	18%	20%	
				government	11%	12%	

Rankings and totals are based on data for the 50 States and D.C.

Data on S&E postdoctorates and S&E graduate students include health fields.

## Federal Obligations for Research and Development in Michigan by Agency and Performer: Fiscal Year 1994

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
<b>Total, all agencies</b>	770,231	99,972	0	227,762	392,223	45,675	4,599	20
<b>Department of Agriculture</b>	22,977	7,872	0	80	15,025	0	0	21
<b>Department of Commerce</b>	19,905	6,777	0	11,762	803	422	141	11
<b>Department of Defense</b>	339,519	78,565	0	194,546	39,779	26,629	0	20
<b>Department of Energy</b>	14,234	0	0	814	13,323	97	0	31
<b>Dept. of Health &amp; Human Services</b>	257,662	0	0	6,798	237,888	11,059	1,917	11
<b>Department of the Interior</b>	7,262	6,748	0	90	424	0	0	23
<b>Department of Transportation</b>	4,803	10	0	604	2,248	0	1,941	25
<b>Environmental Protection Agency</b>	12,541	0	0	7,752	4,189	0	600	9
<b>Nat'l Aeronautics &amp; Space Admin.</b>	23,419	0	0	4,926	11,066	7,427	0	22
<b>National Science Foundation</b>	67,909	0	0	390	67,478	41	0	9
<b>State rank</b>	20	21	na	20	9	14	15	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.